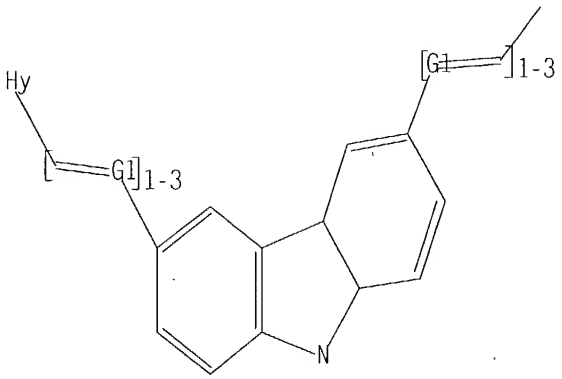
=> d his

(FILE 'HOME' ENTERED AT 14:29:29 ON 10 SEP 2004)

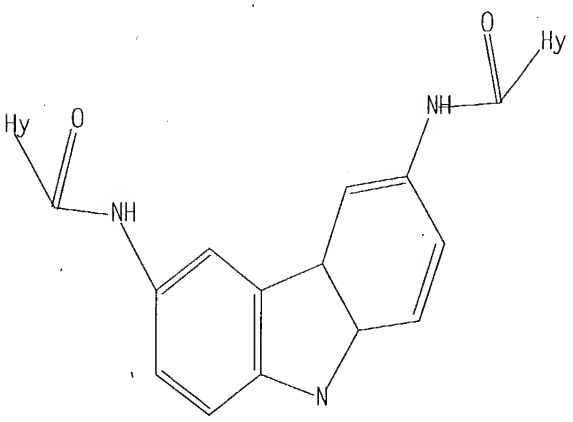
FILE 'REGISTRY' ENTERED AT 14:29:37 ON 10 SEP 2004
L1 STRUCTURE UPLOADED
L2 0 S L1
L3 144 S L1 FULL
L4 STRUCTURE UPLOADED
L5 0 S L1 NOT L4
L6 37 S L5 FULL

=> d que l6 stat
L1 STR



G1 N,CH

Structure attributes must be viewed using STN Express query preparation.
L4 STR



Structure attributes must be viewed using STN Express query preparation.
L6 37 SEA FILE=REGISTRY SSS FUL L1 NOT L4

64.5% PROCESSED 400000 ITERATIONS 37 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.09

FULL FILE PROJECTIONS:	ONLINE	**INCOMPLETE**
	BATCH	**INCOMPLETE**
PROJECTED ITERATIONS:	619811 TO	619811
PROJECTED ANSWERS:	37 TO	79

=> fil capl
FILE 'CAPLUS' ENTERED AT 14:36:25 ON 10 SEP 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 10 Sep 2004 VOL 141 ISS 12
FILE LAST UPDATED: 9 Sep 2004 (20040909/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

'.FIONA' IS DEFAULT FORMAT FOR 'CAPLUS' FILE

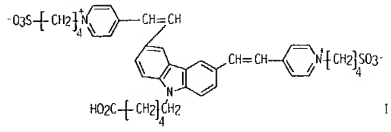
=> s l6
L7 15 L6

=> d 1-15 bib abs hitstr

L7 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:651328 CAPLUS
DN 141:170427
TI Two-photon absorbing compounds and method for fluorescent labeling with the compounds
IN Inagaki, Yoshio; Takizawa, Hiroo; Akiba, Masaharu
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004224746	A2	20040812	JP 2003-15683	20030124
PRAI JP 2003-15683		20030124		

GI

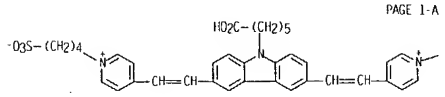


I

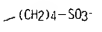
AB Substances are labeled by reacting with two-photon absorbing compds. represented by G(L)nA (G = reactive group forming a covalent bond with the substances; L = linking group; A = organic group derived from HA having two-photon absorption cross section of ≥1000 GM; n = 0, 1). Fluorometry using the two-photon absorbing compds. shows large difference between excitation wavelength and fluorescence wavelength, good three-dimensional spatial resolution, and high sensitivity. Two-photon fluorescence ratio of some compds. were given. Thus, an aqueous gelatin solution was treated with a carbazole derivative having 1 CO2H and 2 SO3- groups (represented by I) and irradiated with 780-nm laser in the dark to generate bluish-green fluorescence only near the focal point.
IT 733805-46-4
RL: ARG (Analytical reagent use); PRP (Properties); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
(two-photon absorbing compds. and method for two-photon fluorescent labeling with the compds.)
RN 733805-46-4 CAPLUS
CN INDEX NAME NOT YET ASSIGNED

L7 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

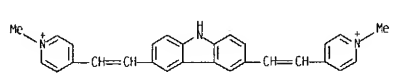
PAGE 1-A



PAGE 1-B

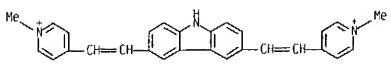


L7 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:534581 CAPLUS
DN 141:187283
TI Detection of quadruplex DNA structures in human telomeres by a fluorescent carbazole derivative
AU Chang, Cheng-Chung; Kuo, I.-Chun; Ling, I.-Fang; Chen, Chin-Tin; Chen, Huei-Chin; Lou, Pei-Jen; Lin, Jing-Jer; Chang, Ta-Chau
CS Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, 106, Taiwan
SO Analytical Chemistry (2004), 76(15), 4490-4494
CODEN: ANCHAM; ISSN: 0003-2700
PB American Chemical Society
DT Journal
LA English
AB Single-stranded telomeric DNA tends to form a four-base-paired planar structure termed G-quadruplex. This structure was easily formed in vitro in the presence of monovalent cations. However, the existence of this structure in native human telomeres is unclear. Here we address this important question through the distinctive properties of 3,6-bis(1-methyl-4-vinylpyridinium)carbazole diiodide (BMVC) upon binding to various DNA structures. Although the fluorescence of BMVC increases significantly in the presence of DNA, BMVC has high sensitivity and binding preference to quadruplex d(T2AG3)4 over duplex DNA. In addition, the fluorescent emissions were characterized around 575 nm for quadruplex d(T2AG3)4 and 545 nm for most of duplex DNA. The 575-nm fluorescence emissions were detected in the mixts. of 2 nM BMVC with the chromosomal DNA that were extracted from human cells, suggesting the presence of quadruplex structure in human nucleus. Further analyzing the BMVC fluorescence at the ends of metaphase chromosomes and other regions of chromosomes, we detected the quadruplex-binding BMVC fluorescence at telomere-proximal regions. Together these results provide the first evidence for the presence of quadruplex structures in human telomeres.
IT 319018-38-7
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(detection of quadruplex DNA structures in human telomeres by fluorescent carbazole derivative)
RN 319018-38-7 CAPLUS
CN Pyridinium, 4,4'-(9H-carbazole-3,6-diyldi-2,1-ethenediyl)bis[1-methyl-, (9CI) (CA INDEX NAME)



RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

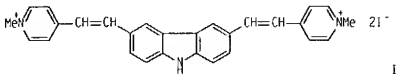
L7 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:779495 CAPLUS
DN 140:2484
TI A fluorescent carbazole derivative: high sensitivity for quadruplex DNA
AU Chang, Cheng-Chung; Wu, Jin-Yi; Chien, Chih-Wei; Wu, Wei-Sung; Liu, Heng; Kang, Chi-Chih; Yu, Liang-Jye; Chang, Ta-Chau
CS Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, 10764, Taiwan
SO Analytical Chemistry (2003), 75(22), 6177-6183
CODEN: ANCHAM; ISSN: 0003-2700
PB American Chemical Society
DT Journal
LA English
AB We have synthesized a novel mol., 3,6-bis(1-methyl-4-vinylpyridium)carbazole diiodide (BMVC), for recognizing specific quadruplex structures, particularly the quadruplex of human telomeric sequence d(T2AG3)4. The fluorescence intensity of the BMVC mol. increases from 1 to almost 2 orders of magnitude upon interacting with various DNAs. At a concentration of BMVC of 10 μM, fluorescence bands with different colors of BMVC in electrophoresis gels of various DNAs can be observed. The fluorescence of BMVC can be used to discriminate between duplex and quadruplex DNAs. At the low concentration of 0.1 μM BMVC in prestained gels, the fluorescence is observed in the presence of quadruplexes with anti-anti-anti-anti and anti-anti-syn-syn arrangements. However, no fluorescence band is detected upon interacting with duplexes and quadruplexes with anti-syn-anti-syn arrangement. Moreover, the sensitivity assays show that as little as 0.2 pmol of quadruplex of d(T2AG3)4 can be revealed by BMVC.
IT 627810-06-4
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(fluorescent carbazole derivative: high sensitivity for quadruplex DNA)
RN 627810-06-4 CAPLUS
CN Pyridinium, 4,4'-(9H-carbazole-3,6-diyldi-2,1-ethenediyl)bis[1-methyl-, diiodide (9CI) (CA INDEX NAME)



●2 I-

RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:526989 CAPLUS
DN 140:128227
TI Synthesis of a carbazole derivative for stabilizing the quadruplex structure
AU Chang, Cheng-Chung; Wu, Jin-Yi; Chang, Ta-Chau
CS Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, 106, Taiwan
SO Journal of the Chinese Chemical Society (Taipei, Taiwan) (2003), 50(2), 185-188
CODEN: JCCTAC; ISSN: 0009-4536
PB Chinese Chemical Society
DT Journal
LA English
OS CASREACT 140:128227
GI



I

AB The new mol. 3,6-bis(1-methyl-4-vinylpyridinium iodide)carbazole (BMVC, I) was synthesized for stabilizing the quadruplex structure of human telomeric sequence d(T2AG3)4 in vitro. Mixing BMVC with the DNA can raise the melting temperature of the d(T2AG3)4 by .apprx.13°, implying that BMVC could be a useful telomerase inhibitor. In addition, the fluorescence of the BMVC increased significantly upon interacting with the d(T2AG3)4, which may be useful as a G-quadruplex specific marker.
IT 647859-38-9
RL: PRP (Properties)
(fluorescence; preparation of carbazole derivative for stabilizing quadruplex structure of human telomeric DNA)
RN 647859-38-9 CAPLUS
CN DNA, d(T-T-A-G-G-G-T-T-A-G-G-G-T-T-A-G-G-G-T-T-A-G-G-G), compd. with 4,4'-[9H-carbazole-3,6-diyldi-(1E)-2,1-ethenediyl]bis[1-methylpyridinium] diiodide (1:1) (9CI) (CA INDEX NAME)

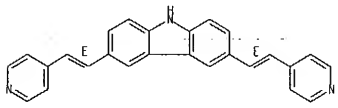
CM 1

CRN 647859-37-8
CMF C28 H25 N3 . 2 I

Double bond geometry as shown.

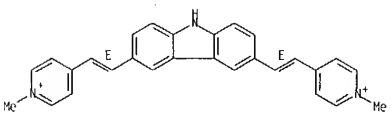
L7 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
(prepn. of carbazole deriv. for stabilizing quadruplex structure of human telomeric DNA)
RN 647859-36-7 CAPLUS
CN 9H-Carbazole, 3,6-bis[(1E)-2-(4-pyridinyl)ethenyl]- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



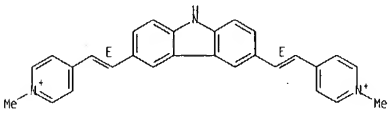
●2 I-

CM 2

CRN 125478-80-0
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT 647859-37-8P
RL: BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of carbazole derivative for stabilizing quadruplex structure of human telomeric DNA)
RN 647859-37-8 CAPLUS
CN Pyridinium, 4,4'-[9H-carbazole-3,6-diyldi-(1E)-2,1-ethenediyl]bis[1-methyl-, diiodide (9CI) (CA INDEX NAME)

Double bond geometry as shown.



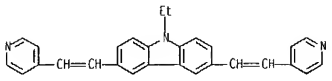
●2 I-

IT 647859-36-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

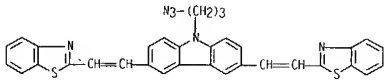
L7 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:56348 CAPLUS
DN 138:114755
TI Composite for two photon absorption
IN Inagaki, Yoshio; Akiba, Masaharu; Harada, Akinori; Tani, Takeharu
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003020469	A2	20030124	JP 2001-206780	20010706
US 2003052311	A1	20030320	US 2002-188959	20020705
PRAI JP 2001-206780	A	20010706		
JP 2001-212310	A	20010712		

AB The invention refers to a composite with a two-photon absorption cross section > 102 Goppert-Mayers (GM) where 1 GM = 1 x 10-50cm4s mol.-1 photon-3 in order to achieve two photon absorption using relatively low-powered lasers.
IT 437713-19-4
RL: DEV (Device component use); USES (Uses)
(conjugated aryl amine and luminescent compound as composite for two photon absorption)
RN 437713-19-4 CAPLUS
CN 9H-Carbazole, 9-ethyl-3,6-bis[2-(4-pyridinyl)ethenyl]- (9CI) (CA INDEX NAME)



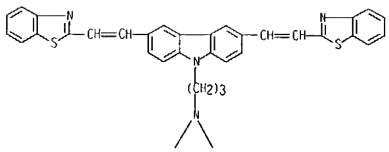
L7 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:619878 CAPLUS
DN 138:89716
TI Synthesis of new C60-based dyads containing carbazole and benzothiazole moieties
AU Wang, Shu; Li, Yuliang; Shi, Zhiqiang; Du, Chimin; Fang, Hongjuan; Xiao, Shengxiong; Zhou, Yunshen; Zhu, Daoben
CS Center for Molecular Sciences, Institute of Chemistry, Chinese Academy of Sciences, Beijing, 100080, Peop. Rep. China
SO Synthetic Communications (2002), 32(16), 2507-2512
CODEN: SYNCAV; ISSN: 0039-7911
PB Marcel Dekker, Inc.
DT Journal
LA English
OS CASREACT 138:89716
AB Two synthetic routes were studied for the title compds.
IT 484674-31-9P 484674-33-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(two routes to new C60-based dyads containing carbazole and benzothiazole moieties)
RN 484674-31-9 CAPLUS
CN 9H-Carbazole, 9-(3-azidopropyl)-3,6-bis[2-(2-benzothiazolyl)ethenyl]- (9CI) (CA INDEX NAME)



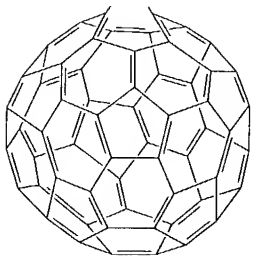
RN 484674-33-1 CAPLUS
CN 2a-Aza-1,2(2a)-homo[5,6]fullerene-C60-Ih, 2a-[3-[3,5-bis[2-(2-benzothiazolyl)ethenyl]-9H-carbazol-9-yl]propyl]- (9CI) (CA INDEX NAME)

L7 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



PAGE 2-A



RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

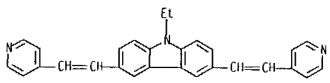
L7 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:458216 CAPLUS
DN 137:39382
TI 2,2'-Bridged biphenyl compound, optical recording material, and recording method
IN Akiba, Masaharu
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002172864	A2	20020618	JP 2001-110119	20010409
PRAI	JP 2000-297219	A	20000928		

OS MARPAT 137:39382
GI

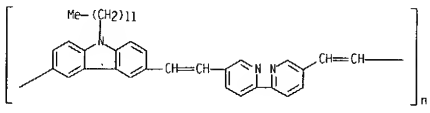
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Laser-sensitive optical recording material contains I [X = CR1R2, NR3, O, S, Se; R1-3 = alkyl, alkenyl, alkynyl, aryl, heterocycle (these may be substituted); R = substituent; n1-2 = 0-4]. The material is recorded by using ≥2 photon absorption induced by irradiation of laser beam with wavelength having no linear absorption and loner than linear absorption band of I. Five other 2,2'-bridged biphenyl compds. such as II, III, and IV [R1-2, R4, R13-14 = alkyl, alkenyl, alkynyl, aryl, heterocycle (these may be substituted); R5-8 = substituent; R15 = (substituted) heterocycle; XY- = Y-valent anion; Y = 1-5; h = 0-4; j = 0-6; i = 0-10; p = 0-2m; m = 0-5] are also claimed. The material shows high d. and capacity recording without using short-wavelength laser.
IT 437713-19-4P
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(optical recording material(containing bridged biphenyl compound)
RN 437713-19-4 CAPLUS
CN 9H-Carbazole, 9-ethyl-3,6-bis[2-(4-pyridinyl)ethenyl]- (9CI) (CA INDEX NAME)



L7 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

L7 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:108041 CAPLUS
DN 136:379109
TI Structural dependence of the selectivity of fluorescent chemosensors to Mg2+ from alkali earth metal ions
AU Pei, Jian; Ding, Ai-Lin; Yu, Wang-Lin; Lai, Yee-Hing
CS Institute of Materials Research and Engineering, National University of Singapore, Singapore, 117602, Singapore
SO Macromolecular Rapid Communications (2002), 23(1), 21-25
CODEN: MRCOE3; ISSN: 1022-1336
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
AB Novel 2,2'-bipyridylene-containing conjugated polymers were synthesized through the Wittig reaction. Some of these polymers show a highly selective affinity toward Mg2+ in a mixture of alkaline earth metal ions, which is different from the 2,2'-bipyridylene-containing poly(phenylene vinylene) derivs. reported previously. This is the 1st case to demonstrate that some materials show a selectivity toward Mg2+. The structures of the polymers may play a crucial role for this selectivity.
IT 423760-68-3P
RL: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(structural dependence of the selectivity of fluorescent chemosensors to Mg2+ from alkali earth metal ions)
RN 423760-68-3 CAPLUS
CN Poly[(9-dodecyl-9H-carbazole-3,6-diyl)-1,2-ethenediyl[2,2'-bipyridine]-5,5'-diyl-1,2-ethenediyl] (9CI) (CA INDEX NAME)



RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:532628 CAPLUS
DN 135:241856
TI Theoretical study TPA properties of a series of two-dimensional charge-transfer derivatives
AU Zhou, Yu-Fang; Meng, Fan-Qing; Zhao, Xian; Feng, Sheng-Yu; Jiang, Min-Hu
CS State Key Laboratory of Crystal Materials, Department of Physics, Shandong University, Jinan, 250100, Peop. Rep. China
SO Chemical Physics (2001), 269(1-3), 441-445
CODEN: CMPHC2; ISSN: 0301-0104
PB Elsevier Science B.V.
DT Journal
LA English
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A new series of two-dimensional charge-transfer chromophore (I and II; R=C6H13, H, Me, Et; X-= tetrafluoroborate) were designed and two of them were synthesized. Both theor. and exptl. results show there is no linear absorption in 620-1200 nm, so two-photon properties can be expected in this range. Two-photon absorption (TPA) cross-sections were theor. studied by using quantum-chemical INDO/CI method combined with sum-over-states expression. The results suggest those compds. possess large TPA cross-sections as well as appropriate corresponding wavelengths, implying that they are good candidates for two-photon applications.
IT 281193-76-8 360062-70-0 360062-72-2
360062-74-4
RL: PRP (Properties)
(quantum chemical study of two-photon absorption of two-dimensional charge-transfer compds.)
RN 281193-76-8 CAPLUS
CN Pyridinium, 4,4'-[(9-hexyl-9H-carbazole-3,6-diyl)di-(1E)-2,1-ethenediyl]bis[1-(2-hydroxyethyl)-, bis[tetraphenylborate(1-)] (9CI) (CA INDEX NAME)

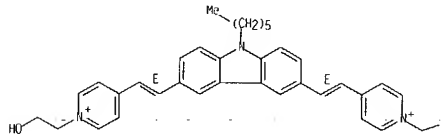
CM 1

CRN 281193-75-7
CMF C36 H41 N3 O2

Double bond geometry as shown.

L7 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

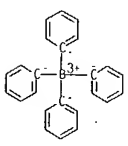
PAGE 1-A



PAGE 1-B

CM 2

CRN 4358-26-3
CMF C24 H20 B
CCI CCS



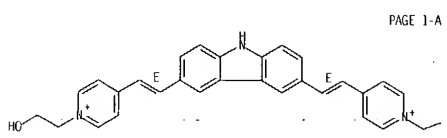
RN 360062-70-0 CAPLUS
CN Pyridinium, 4,4'-[9H-carbazole-3,6-diyldi-(1E)-2,1-ethenediyl]bis[1-(2-hydroxyethyl)-, bis[tetraphenylborate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 360062-69-1
CMF C30 H29 N3 O2

L7 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
Double bond geometry as shown.

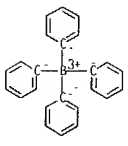
PAGE 1-A



PAGE 1-B

CM 2

CRN 4358-26-3
CMF C24 H20 B
CCI CCS



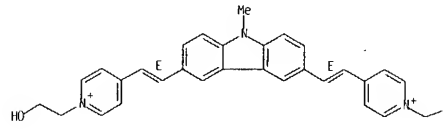
RN 360062-72-2 CAPLUS
CN Pyridinium, 4,4'-[(9-methyl-9H-carbazole-3,6-diyl)di-(1E)-2,1-ethenediyl]bis[1-(2-hydroxyethyl)-, bis[tetraphenylborate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 360062-71-1
CMF C31 H31 N3 O2

L7 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
Double bond geometry as shown.

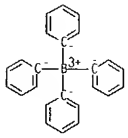
PAGE 1-A



PAGE 1-B

CM 2

CRN 4358-26-3
CMF C24 H20 B
CCI CCS



RN 360062-74-4 CAPLUS
CN Pyridinium, 4,4'-[(9-ethyl-9H-carbazole-3,6-diyl)di-(1E)-2,1-ethenediyl]bis[1-(2-hydroxyethyl)-, bis[tetraphenylborate(1-)] (9CI) (CA INDEX NAME)

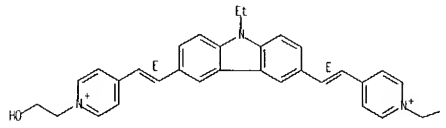
CM 1

L7 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

CRN 360062-73-3
CMF C32 H33 N3 O2

Double bond geometry as shown.

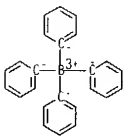
PAGE 1-A



PAGE 1-B

CM 2

CRN 4358-26-3
CMF C24 H20 B
CCI CCS



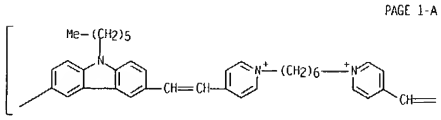
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:901809 CAPLUS
DN 134:163425
TI Synthesis and characterization of a new lambda-type polymer for nonlinear optics based on carbazole derivative salt
AU Meng, Fanqing; Ren, Quan; Xu, Dong; Yuan, Duorong; Lu, Mengkai; Zhang, Guanghui; Guo, Shiyi; Zhao, Xian; Wang, Xinqiang; Fang, Changshui; Xu, Gang; Liu, Xuchun; Ye, Peixian
CS New Materials Group, National Key Laboratory of Crystal Material, Shandong University, Jinan, 250100, Peop. Rep. China
SO Reactive & Functional Polymers (2000), 46(1), 59-65
CODEN: RFPOF6; ISSN: 1381-5148
PB Elsevier Science B.V.
DT Journal
LA English
AB A new pyridinium ionene polymer containing carbazole derivative salt was synthesized by the copolymn. of 3,6-diformyl-N-hexylcarbazole with N,N'-(1,6-hexanediyl)bis(4-methylpyridinium) bis(tetraphenylborate). The second-order nonlinear optical coeffs. of the spin-coated polymer film were determined by the Maker fringe method using a Q-switched Nd:YAG laser (1064 nm) after corona-poling. The d33 and d31 values were 8.3 and 2.3 pm/V, resp.
IT 324757-07-5P, N,N'-(1,6-Hexanediyl)bis(4-methylpyridinium) bis(tetraphenylborate)-N-hexyl-3,6-carbazoledicarboxaldehyde copolymer, sru
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and NLO properties of ionene polymer containing carbazole units)
RN 324757-07-5 CAPLUS
CN Poly[(9-hexyl-9H-carbazole-3,6-diyl)-1,2-ethenediylpyridinium-4,1-diyl-1,6-hexanediylpyridinium-1,4-diyl-1,2-ethenediyl bis[tetrafluoroborate(1-)]] (9CI) (CA INDEX NAME)

CM 1

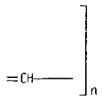
CRN 324757-06-4
CMF (C38 H43 N3)n
CCI PMS

PAGE 1-A



L7 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-B



CM 2

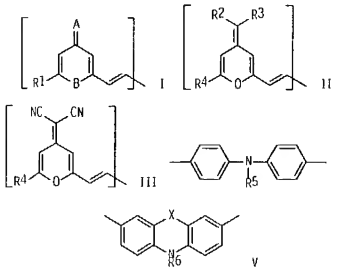
CRN 14874-70-5
CMF B F4
CCI CCS

RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:835265 CAPLUS
ON 133:367677
TI Organic electroluminescent devices
IN Tamano, Michiko
PA Toyo Ink Mfg. Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 32 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000328052	A2	20001128	JP 1999-135498	19990517
PRAI JP 1999-135498		19990517		

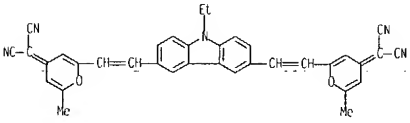
GI



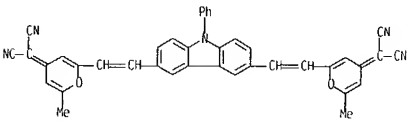
AB The devices comprise I, II, III, IV and V (R1 = H, (substituted) alkyl, (substituted) aryl; A = O, methylene; B = O, S; R2,3 = H, cyano, halo, alkylcarbonyl, alkoxycarbonyl, cannot be H simultaneously, may form a ring; R4-6 = H, (substituted) alkyl, (substituted) aryl; X = direct bonding, divalent (substituted) alkyl, divalent (substituted) aryl, O, S, (substituted) N, carbonyl, thiocarbonyl).

IT 307519-17-1 307519-18-2 307519-19-3
307519-23-9
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent devices)

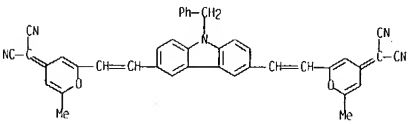
L7 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
RN 307519-17-1 CAPLUS
CN Propanedinitrile, 2,2'-[(9-ethyl-9H-carbazole-3,6-diyl)bis[2,1-ethenediyl(6-methyl-4H-pyran-2-yl-4-ylidene)]]bis- (9CI) (CA INDEX NAME)



RN 307519-18-2 CAPLUS
CN Propanedinitrile, 2,2'-[(9-phenyl-9H-carbazole-3,6-diyl)bis[2,1-ethenediyl(6-methyl-4H-pyran-2-yl-4-ylidene)]]bis- (9CI) (CA INDEX NAME)



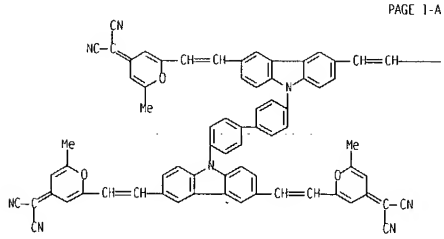
RN 307519-19-3 CAPLUS
CN Propanedinitrile, 2,2'-[[9-(phenylmethyl)-9H-carbazole-3,6-diyl]bis[2,1-ethenediyl(6-methyl-4H-pyran-2-yl-4-ylidene)]]bis- (9CI) (CA INDEX NAME)



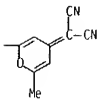
RN 307519-23-9 CAPLUS
CN Propanedinitrile, 2,2',2'',2'''-[[1,1'-biphenyl]-4,4'-diylbis[9H-carbazole-9,3,6-triylbis[2,1-ethenediyl(6-methyl-4H-pyran-2-yl-4-ylidene)]]]tetrakis- (9CI) (CA INDEX NAME)

L7 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

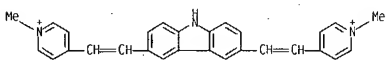
PAGE 1-A



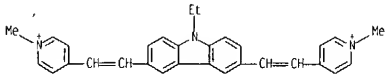
PAGE 1-B



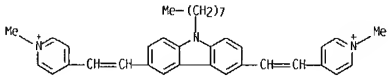
L7 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:819764 CAPLUS
DN 134:107619
TI Linear and nonlinear optical properties of novel ionic chromophores
AU Duan, Xuan-Ming; Wada, Tatsuo; Okada, Shuji; Oikawa, Hidetoshi; Matsuda, Hiro; Sasabe, Hiroyuki; Nakanishi, Hachiro
CS Biopolymer Physics Laboratory, The Institute of Physical and Chemical Research (RIKEN), Saitama, 351-0198, Japan
SO Materials Research Society Symposium Proceedings (2000), 598(Electrical, Optical, and Magnetic Properties of Organic Solid-State Materials V), BB3.31/1-BB3.31/6
CODEN: MRSPDH; ISSN: 0272-9172
PB Materials Research Society
DT Journal
LA English
AB Novel ionic chromophores consisting of a carbazole moiety and pyridinium rings connected by a double bond were designed and synthesized as nonlinear optical materials. Their linear and nonlinear optical properties were studied by semiempirical calcn. and experiment. The absorption maximum wavelengths (λmax) of these ionic chromophores showed shifting to longer wavelength region than their corresponding elec. neutral compds. These ionic chromophores possess large 1st hyperpolarizabilities (β).
IT 319018-38-7P 319018-40-1P
RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation)
(failed synthesis and calculated dipole moment and hyperpolarizability of novel ionic chromophores)
RN 319018-38-7 CAPLUS
CN Pyridinium, 4,4'-(9H-carbazole-3,6-diyldi-2,1-ethenediyl)bis[1-methyl-, (9CI) (CA INDEX NAME)



RN 319018-40-1 CAPLUS
CN Pyridinium, 4,4'-[(9-ethyl-9H-carbazole-3,6-diyl)di-2,1-ethenediyl]bis[1-methyl-, (9CI) (CA INDEX NAME)



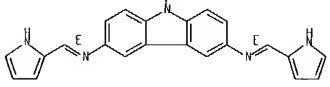
L7 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
IT 319018-41-2P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis and linear and nonlinear optical properties of novel ionic chromophores)
RN 319018-41-2 CAPLUS
CN Pyridinium, 4,4'-[(9-octyl-9H-carbazole-3,6-diyl)di-2,1-ethenediyl]bis[1-methyl-, (9CI) (CA INDEX NAME)



RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:799173 CAPLUS
DN 134:159233
TI Novel chromogenic substrates with metal chelating properties for the histochemical detection of peroxidasic activity, derived from 3-amino-9-ethylcarbazole (AEC) and 3,6-diamino-9-ethylcarbazole
AU Krieg, Reimar; Halbhuber, Karl-Jurgen; Oehring, H.
CS Institute of Anatomy/Anatomy II, Friedrich Schiller University Jena, Jena, 07743, Germany
SO Cellular and Molecular Biology (Paris) (2000), 46(7), 1191-1212
CODEN: CMOBEF; ISSN: 0145-5680
PB C.M.B. Association
DT Journal
LA English
AB For staining of peroxidase activity, 3-amino-9-ethylcarbazole (AEC) was chemical modified in order to obtain chromogenic enzyme substrates with improved staining properties. Through systematic structure/staining considerations of a series of novel substrates, it can be generalized that the performance of traditional chromogenic peroxidase amine-substrates is accessible and a considerably improvement in terms of sensitivity and adaptability for various application purposes (solubility and color of the reaction product, electron dense and osmiophilic properties,...) can be obtained by attachment of chelating N-benzyl-moieties and making available the well known metal catalytic effect in a proposed intramol. way. Thus, the model compds. 3-(arylmethyl)amino-9-ethyl-carbazole [I] and 3,6-bis-(arylmethyl)amino-9-ethyl-carbazole [II] were synthesized by condensation of 3-amino-9-ethylcarbazole (AEC) or the corresponding 3,6-diamine with aromatic aldehydes. The resulting Schiff bases were subsequently reduced with sodium borohydride. The obtained benzylamines I and II were examined as chromogenic substrates: (1) qual. in test tube expts. concerning color, precipitation behavior and solubility of the ppts., (2) quant. by means of electroblotted dilution series of horseradish peroxidase, and finally in a biol. environment for the localization of endogenous peroxidasic activity (3) in native cryotome tissues of Wistar rats. (4) The usefulness of the new approach for electron microscopy was revealed, too. Thus the discrimination between internum and externum of specific granules after osmium tetroxide treatment was higher if compared with results obtained by the Karnovsky protocol. The wide spread variation of substitution patterns of the novel reagents gave reason for structure-reactivity considerations and ongoing leading structures. The stereochem. and electronic factors as well as competing reaction pathways governing the reaction course are briefly discussed. In addition, the metal associating reagents are highly effective in oxidative side-coupling reactions with aromatic amine or phenol-additives exemplified here by means of 4-amino-N,N-diphenylamine. The reagents I and II are obtainable in a simple in situ synthesis, too, offering in principle a "chemical construction unit". The demonstrated approach is of general interest for bioanal. applications offering an access to potentially novel chromogens and electron opaque markers for the detection of peroxidase activity/hydroperoxides or related redox enzyme systems.
IT 325158-94-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(novel chromogenic substrates with metal chelating properties derived from 3-amino-9-ethylcarbazole (AEC) and 3,6-diamino-9-ethylcarbazole for histochem. detection of peroxidase activity)
RN 325158-94-9 CAPLUS
CN 9H-Carbazole-3,6-diamine, 9-ethyl-N,N'-bis(1H-pyrrol-2-ylmethylene)-, dihydrochloride, [N(E),N'(E)]- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



●2 HCl

RE.CNT 81 THERE ARE 81 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:304617 CAPLUS
DN 133:90972
TI Design, synthesis of two-dimensional charge transfer molecules based on pyridinium salts and determination of their first hyperpolarizability
AU Meng, Fan-Qing; Xu, Dong; Ren, Quan; Yuan, Duo-Rong; Lu, Meng-Kai; Zhang, Guang-Hui; Zhao, Xian; Wang, Xin-Qiang; Guo, Shi-Yi; Fang, Chang-Shui; Wang, Xin; Lu, Zu-Hong; Cui, Yi-Ping
CS National Key Laboratory of Crystal Materials, Department of Optics, Shandong University, Jinan, 250100, Peop. Rep. China
SO Huaxue Xuebao (2000), 58(4), 384-389
CODEN: HHHPA4; ISSN: 0567-7351
PB Kexue Chubanshe
DT Journal
LA Chinese
AB Two new two-dimensional charge transfer (2DCT) chromophore mols. for nonlinear optics (NLO) were designed and synthesized with pyridinium cation as electron acceptor. They are trans-4,4'-di{p-[(N-ethyl-N-hydroxyethyl)amino]styryl}-N,N'-(1,2-ethylene)-2,2'-bipyridinium di-tetraphenylborate and trans-N-hexylcarbazole-3,6-di(p-ethenyl-N-hydroxyethyl pyridinium) di-tetraphenylborate. The first hyperpolarizability (β) values were determined by Hyper-Rayleigh Scattering (HRS) technique. The large β values are obtained as 786 x 10-30 esu and 1770 x 10-30 esu at 1064 nm and corresponding β0 are 215 x 10-30 esu and 119 x 10-30 esu calculated according to two-level model, resp. The large value of β was explained qual. from the point of view of mol. structure.
IT 281193-76-8P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(in preparation of two-dimensional charge transfer mols. based on pyridinium salts and determination of first hyperpolarizability)
RN 281193-76-8 CAPLUS
CN Pyridinium, 4,4'-[(9-hexyl-9H-carbazole-3,6-diyl)di-(1E)-2,1-ethenediyl]bis[1-(2-hydroxyethyl)-, bis[tetraphenylborate(1-)] (9CI) (CA INDEX NAME)

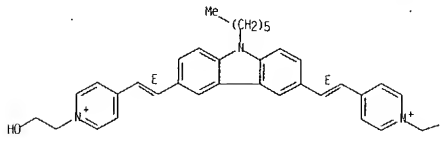
CM 1

CRN 281193-75-7
CMF C36 H41 N3 O2

Double bond geometry as shown.

L7 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

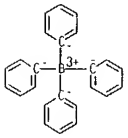
PAGE 1-A



PAGE 1-B

CM 2

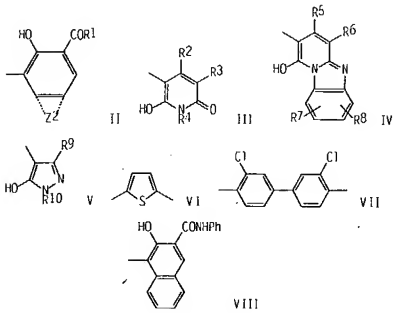
CRN 4358-26-3
CMF C24 H20 B
CCI CCS



L7 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1991:174920 CAPLUS
DN 114:174920
TI Electrophotographic photoreceptor using new bisazo compound as charge-generating agent
IN Hattori, Yoshimasa; Kosho, Noboru
PA Fuji Electric Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 02220063	A2	19900903	JP 1989-41118	19890221
PRAI JP 1989-41118		19890221		

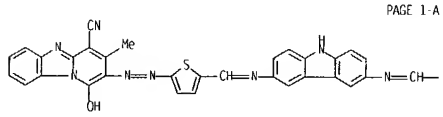
OS MARPAT 114:174920
GI



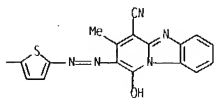
AB The title photoreceptor comprises a photosensitive layer containing ≥1 bisazo compound RN:NZ(CH:CH)nCH:NZ1N:CH(CH:CH)nZN:NR [I; Z = aromatic heterocycle; Z1 = none, aryl, heterocycle, these groups linked with one another; n = 0-2; R = coupler residue II, III, IV, or V (Z2 = residue condensed with the benzene ring to form a polycyclic aromatic ring or heterocycle; R1 = OR11, NR12R13 (R11, R12, R13 = H (substituted) alkyl, (substituted) aryl, (substituted) heterocycl); R2, R5 = (substituted) alkyl, (substituted) aryl, (substituted) heterocycle; R3, R6 = H, CN,

L7 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
carbamoyl, CO2H, ester, acyl; R4 = H, (substituted) alkyl, cycloalkyl, alkenyl, aryl, arom. heterocycle; R7, R8 = H, halo, NO2, (substituted) alkyl, alkoxy; R9 = alkyl, aryl, CO2H; R10 = (substituted) aryl, arom. heterocycle)]. The photoreceptor shows good photosensitivity and durability. Thus, an Al vapor-deposited polyester film was coated with a photosensitive layer contg. I (Z = VI, Z1 = VII, n = 0, R = VIII and 1-phenyl-3-(p-diethylaminostyryl)-5-(p-diethylaminophenyl)-2-pyrazoline to give a photoreceptor.
IT 133266-85-0 133266-86-1 133266-87-2
133266-88-3 133266-89-4 133266-90-7
133266-91-8 133266-92-9 133294-09-4
133294-10-7
RL: USES (Uses)
(charge-generating agent, electrophotog. photoreceptor using)
RN 133266-85-0 CAPLUS
CN Pyrido[1,2-a]benzimidazole-6-carbonitrile, 8,8'-[9H-carbazole-3,6-diylbis(nitrilomethylidyne-5,2-thiophenediylazo)]bis[9-hydroxy-7-methyl- (9CI) (CA INDEX NAME)

PAGE 1-A



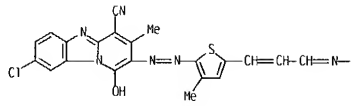
PAGE 1-B



RN 133266-86-1 CAPLUS
CN Pyrido[1,2-a]benzimidazole-6-carbonitrile, 8,8'-[9H-carbazole-3,6-diylbis[nitrilo-1-propen-1-yl-3-ylidene(3-methyl-5,2-thiophenediyl)azo]]bis[2-chloro-9-hydroxy-7-methyl- (9CI) (CA INDEX NAME)

L7 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



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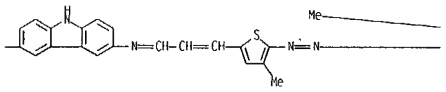

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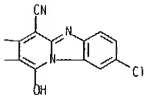
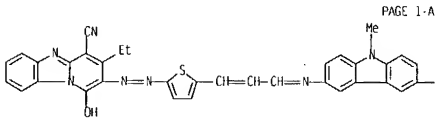


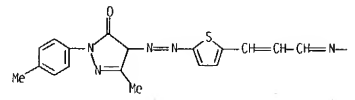
RN 133266-87-2 CAPLUS
CN Pyrido[1,2-a]benzimidazole-6-carbonitrile, 8,8'-[(9-methyl-9H-carbazole-3,6-diyl)bis(nitrilo-1-propen-1-yl-3-ylidene-5,2-thiophenediylazo)]bis[7-ethyl-9-hydroxy- (9CI) (CA INDEX NAME)

PAGE 1-A



L7 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



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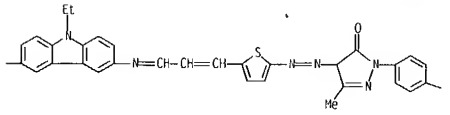
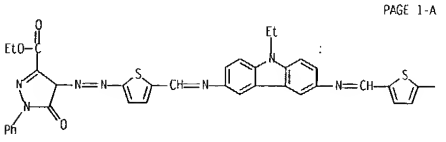


PAGE 1-C

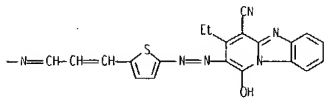
RN 133266-90-7 CAPLUS
CN 1H-Pyrazole-3-carboxylic acid, 4,4'-[(9-ethyl-9H-carbazole-3,6-diyl)bis(nitrilomethylidyne-5,2-thiophenediylazo)]bis[4,5-dihydro-5-oxo-1-phenyl-, diethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



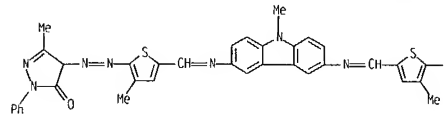
L7 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-B



RN 133266-88-3 CAPLUS
CN 3H-Pyrazol-3-one, 4,4'-[(9-methyl-9H-carbazole-3,6-diyl)bis[nitrilomethylidyne(3-methyl-5,2-thiophenediyl)azo]]bis[2,4-dihydro-5-methyl-2-phenyl- (9CI) (CA INDEX NAME)

PAGE 1-A



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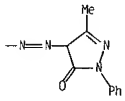
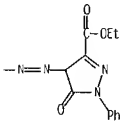


RN 133266-89-4 CAPLUS
CN 3H-Pyrazol-3-one, 4,4'-[(9-ethyl-9H-carbazole-3,6-diyl)bis(nitrilo-1-propen-1-yl-3-ylidene-5,2-thiophenediylazo)]bis[2,4-dihydro-5-methyl-2-(4-methylphenyl)- (9CI) (CA INDEX NAME)

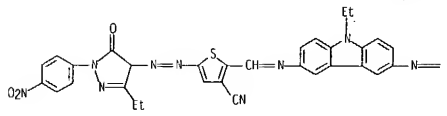
L7 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-B



RN 133266-91-8 CAPLUS
CN 3-Thiophenecarbonitrile, 2,2'-[(9-ethyl-9H-carbazole-3,6-diyl)bis(nitrilomethylidyne)]bis[5-[[3-ethyl-4,5-dihydro-1-(4-nitrophenyl)-5-oxo-1H-pyrazol-4-yl]azo]- (9CI) (CA INDEX NAME)

PAGE 1-A



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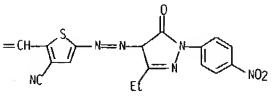
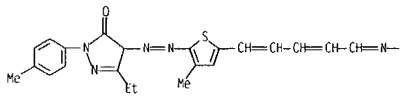


RN 133266-92-9 CAPLUS
CN 3H-Pyrazol-3-one, 4,4'-[(9-ethyl-9H-carbazole-3,6-diyl)bis[nitrilo-1,3-pentadien-1-yl-5-ylidene(3-methyl-5,2-thiophenediyl)azo]]bis[5-ethyl-2,4-dihydro-2-(4-methylphenyl)- (9CI) (CA INDEX NAME)

L7 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



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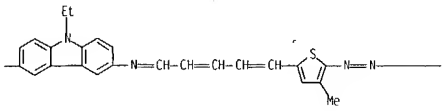

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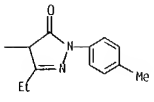
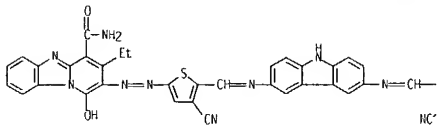


RN 133294-09-4 CAPLUS
CN Pyrido[1,2-a]benzimidazole-4-carboxamide, 2,2'-[9H-carbazole-3,6-diylbis[nitrilomethylidyne(4-cyano-5,2-thiophenediyl)azo]]bis[3-ethyl-1-hydroxy- (9CI) (CA INDEX NAME)

L7 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



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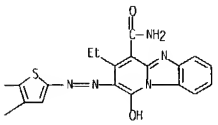
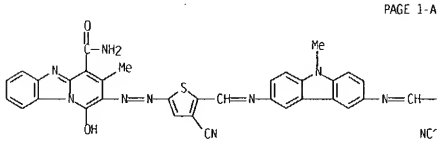


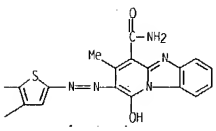
RN 133294-10-7 CAPLUS
CN Pyrido[1,2-a]benzimidazole-4-carboxamide, 2,2'-[(9-methyl-9H-carbazole-3,6-diyl)bis[nitrilomethylidyne(4-cyano-5,2-thiophenediyl)azo]]bis[1-hydroxy-3-methyl- (9CI) (CA INDEX NAME)

PAGE 1-A



L7 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-B



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L12           4 SEA FILE=CAPLUS ABB=ON  PLU=ON  L11 AND CARBAZOLE


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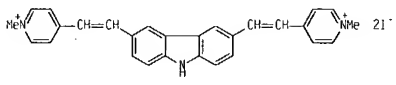
L12 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:534581 CAPLUS
DN 141:187283
TI Detection of quadruplex DNA structures in human telomeres by a fluorescent **carbazole** derivative
AU **Chang, Cheng-Chung**; Kuo, I.-Chun; Ling, I.-Fang; Chen, Chin-Tin; Chen, Huei-Chin; Lou, Pei-Jen; Lin, Jing-Jer; **Chang, Ta-Chau**
CS Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, 106, Taiwan
SO Analytical Chemistry (2004), 76(15), 4490-4494
CODEN: ANCHAM; ISSN: 0003-2700
PB American Chemical Society
DT Journal
LA English
AB Single-stranded telomeric DNA tends to form a four-base-paired planar structure termed G-quadruplex. This structure was easily formed in vitro in the presence of monovalent cations. However, the existence of this structure in native human telomeres is unclear. Here we address this important question through the distinctive properties of 3,6-bis(1-methyl-4-vinylpyridinium)**carbazole** diiodide (BMVC) upon binding to various DNA structures. Although the fluorescence of BMVC increases significantly in the presence of DNA, BMVC has high sensitivity and binding preference to quadruplex d(T2AG3)4 over duplex DNA. In addition, the fluorescent emissions were characterized around 575 nm for quadruplex d(T2AG3)4 and 545 nm for most of duplex DNA. The 575-nm fluorescence emissions were detected in the mixts. of 2 nM BMVC with the chromosomal DNA that were extracted from human cells, suggesting the presence of quadruplex structure in human nucleus. Further analyzing the BMVC fluorescence at the ends of metaphase chromosomes and other regions of chromosomes, we detected the quadruplex-binding BMVC fluorescence at telomere-proximal regions. Together these results provide the first evidence for the presence of quadruplex structures in human telomeres.
RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:779495 CAPLUS
DN 140:2484
TI A fluorescent **carbazole** derivative: high sensitivity for quadruplex DNA
AU **Chang, Cheng-Chung**; **Wu, Jin-Yi**; Chien, Chih-Wei; Wu, Wei-Sung; Liu, Heng; Kang, Chi-Chih; Yu, Liang-Jye; **Chang, Ta-Chau**
CS Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, 10764, Taiwan
SO Analytical Chemistry (2003), 75(22), 6177-6183
CODEN: ANCHAM; ISSN: 0003-2700
PB American Chemical Society
DT Journal
LA English
AB We have synthesized a novel mol., 3,6-bis(1-methyl-4-vinylpyridinium) **carbazole** diiodide (BMVC), for recognizing specific quadruplex structures, particularly the quadruplex of human telomeric sequence d(T2AG3)4. The fluorescence intensity of the BMVC mol. increases from 1 to almost 2 orders of magnitude upon interacting with various DNAs. At a concentration of BMVC of 10 μM, fluorescence bands with different colors of BMVC in electrophoresis gels of various DNAs can be observed. The fluorescence of BMVC can be used to discriminate between duplex and quadruplex DNAs. At the low concentration of 0.1 μM BMVC in prestained gels, the fluorescence is observed in the presence of quadruplexes with anti-anti-anti-anti and anti-anti-syn-syn arrangements. However, no fluorescence band is detected upon interacting with duplexes and quadruplexes with anti-syn-anti-syn arrangement. Moreover, the sensitivity assays show that as little as 0.2 pmol of quadruplex of d(T2AG3)4 can be revealed by BMVC.
RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:630024 CAPLUS
TI Interaction of a novel **carbazole** derivative with human telomere: a potent telomerase inhibitor
AU **Chang, Cheng Chung**; **Wu, Jin-Yi**; **Chang, Ta-Chau**
CS Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, 106, Taiwan
SO Abstracts of Papers, 226th ACS National Meeting, New York, NY, United States, September 7-11, 2003 (2003), BIOL-156 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69EKY9
DT Conference; Meeting Abstract
LA English
AB We have synthesized a novel mol. of 3,6-Bis(1-methyl-4-vinylpyridium) **carbazole** (BMVC) for stabilizing the quadruplex structure of human telomeric sequence of d(T2AG3)4 and inhibiting telomerase activity. Mixing BMVC with the d(T2AG3)4 can raise the melting temperature of the d(T2AG3)4 by .apprx. 13°C in vitro, implying that BMVC is a good quadruplex stabilizer. The IC50 value of BMVC (0.5 μM) suggests that BMVC is a good telomerase inhibitor. On the other hand, the cell viability assay suggests that the cytotoxic EC50 values of BMVC concns. against a panel of human lung adenocarcinoma CL1-1 cells and mouse embryonic fibroblast NIH3T3 cells are similar and slightly larger than 20 μM. Absorbance titration indicates the binding affinity of BMVC to d(T2AG3)4 larger than to [d(GCGCA2T2GCGC)]2. The observations of quadruplex stability, telomerase inhibitory activity, cellular cytotoxicity, and binding selectivity suggest that BMVC might be a good candidate for the application of clin. telomerase inhibitor.

L12 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:526989 CAPLUS
DN 140:128227
TI Synthesis of a **carbazole** derivative for stabilizing the quadruplex structure
AU **Chang, Cheng-Chung**; **Wu, Jin-Yi**; **Chang, Ta-Chau**
CS Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, 106, Taiwan
SO Journal of the Chinese Chemical Society (Taipei, Taiwan) (2003), 50(2), 185-188
CODEN: JCCTAC; ISSN: 0009-4536
PB Chinese Chemical Society
DT Journal
LA English
OS CASREACT 140:128227
GI



I

AB The new mol., 3,6-bis(1-methyl-4-vinylpyridinium iodide)**carbazole** (BMVC, I) was synthesized for stabilizing the quadruplex structure of human telomeric sequence d(T2AG3)4 in vitro. Mixing BMVC with the DNA can raise the melting temperature of the d(T2AG3)4 by .apprx.13°, implying that BMVC could be a useful telomerase inhibitor. In addition, the fluorescence of the BMVC increased significantly upon interacting with the d(T2AG3)4, which may be useful as a G-quadruplex specific marker.
RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT